

AUTHOR INDEX

- Abete, A., 335
 Ackerman, B., 135
 Ahrenkiel, R. K., 223
 D'Aiello, R. V., 151
 Al-Rawi, N. A., 199
 Albright, S.P., 135
 Aldawody, N. A., 11
 Alkaisi, M. M., 11
 de Andrade, A. M., 351
 Anis, W. R., 19
 Aperathitis, E., 261
 Asher, S. E., 223
 Astier, S., 277

 Balasubramanian, N., 319
 Banerjee, S., 77
 Bates, Jr., C.W., 177
 Bhatnagar, M. C., 343
 Borrego, J. M., 95
 Bothra, S., 95
 Brown, B. J., 177
 Bryant, F. J., 261

 Cahen, D., 57
 Carotta, M. C., 287
 Charles, J. P., 41
 Chen, E. Y., 315
 Da Cruz, M. T. F., 351

 David, J. P., 327
 Deshmukh, L. P., 1

 Fagnan, D. A., 151
 Fang, P. H., 315
 Ferraro, G., 335

 Gonzalez Diaz, G., 31
 Green, M. A., 193, 233

 Haba, B., 177

 Iborra, E., 31

 Jennings, C., 145
 Johnson, M., 121
 Joshi, J. C., 343

 Kazmerski, L. L., 273
 Kisilev, A., 57
 Kuryla, M. S., 223

 Lee, J. C., 209
 Liu, C. H., 129
 Liu, D. D., 223

 Marcu, V., 57
 Martil, I., 31
 Martinelli, G., 287
 Martinuzzi, S., 327
 McLeod, D., 115
 Merli, M., 287
 Meyers, P. V., 129
 Mialhe, P., 41
 Mon, G. R., 103
 Morales-Acevedo, A., 293
 Moskowitz, P. D., 209
 Müller, R., 185
 Murad, J., 69

 Ndlela, Z., 177
 Nelson, A. J., 273
 Neumann, H., 301
 Noufi, R., 57

 Palmeri, D., 287
 Palwe, A. B., 1
 Partain, L. D., 223
 Passari, L., 287
 Pelanchon, F., 41

 Pratt, R. G., 163
 Protin, L., 277

 Ramanathan, V., 129
 Robinson, A. M., 233
 Rodriguez, J. A., 241
 Rolland, J. M., 277
 Ross, Jr., R. G., 103
 Rumyantsev, V. D., 241
 Russell, L. A., 129

 Saha, H., 77
 Sanchez Quesada, F., 31
 Santamaria, J., 31
 Sawant, V. S., 1
 Schock, H. W., 57
 Scott, C. G., 261
 Shaalan, M. S., 185
 Simo, A., 327
 Smestad, G., 177
 Sopori, B. L., 253
 van Steenwinkel, R., 287
 Sproul, A. B., 233
 Subrahmanyam, A., 319
 Sugimura, R. S., 103
 Sumner, D., 145

 Takeuchi, T., 315
 Tomlinson, R. D., 301
 Twesme, E. N., 115

 Veissid, N., 351

 Wang, A.-H., 193
 Weiss, P., 115
 Wen, L. C., 103
 Whitaker, C., 145
 Willison, M. R., 193

 Zhao, J.-H., 193

SUBJECT INDEX

- Annealing
 - relation between electrical properties and composition in CuInSe_2 single crystals, 301
- Antireflection coating thickness
 - optimization of antireflection coating thickness for textured polycrystalline silicon solar cells - an experimental study, 253
- Antireflection film
 - optimization of antireflection coating thickness for textured polycrystalline silicon solar cells - an experimental study, 253
- Arrays
 - factors affecting the hot spot efficacy in photovoltaic arrays, 11
- Arsenic
 - an investigation of arsenic-doped CdS /electrolyte solar cells, 1
- Battery voltage regulator
 - design of a novel battery voltage regulator for photovoltaic systems, 19
- Calculating method
 - method of calculating the distributed and lumped components of the resistance in solar cells, 241
- CdS
 - an investigation of arsenic-doped CdS /electrolyte solar cells, 1
 - electrical characterization of all-sputtered $\text{CdS}/\text{CuInSe}_2$ solar cell heterojunctions, 31
- CdS/CdTe modules
 - encapsulation and life testing issues for 1 ft² CdS/CdTe modules, 135
- $\text{CdS}/\text{CdTe}/\text{ZnTe}$ submodules
 - indoor stability tests on $\text{CdS}/\text{CdTe}/\text{ZnTe}$ n-i-p submodules, 129
- $\text{CdS}/\text{CuInSe}_2$
 - depth and interface resolution in $\text{CdS}/\text{CuInSe}_2$ heterostructures, 273
- CdSe thin films
 - the optical constants of CdSe thin films in the visible and near-IR, 185
- Cell interconnects
 - improved soldering technique for concentrator solar cells, 193
- Collection
 - the quantum collection efficiency of heavily doped emitters in silicon solar cells, 293
- Concentrated modules
 - field performance of concentrated photovoltaic modules, 343
- Concentrator solar cells
 - improved soldering technique for concentrator solar cells, 193
- Contact resistance
 - method of calculating the distributed and lumped components of the resistance in solar cells, 241
- Copper
 - photoelectrochemical characterization of CuGaSe_2 and $\text{Cu}(\text{Ga}, \text{In})\text{Se}_2$ films, 57
- Corrosion effects
 - thin film module fabrication and reliability advances, 121
- CuInSe_2
 - characterization of structural defects in the presence of In_2O_3 in CuInSe_2 prepared by spray pyrolysis, 177
 - electrical characterization of all-sputtered $\text{CdS}/\text{CuInSe}_2$ solar cell heterojunctions, 31
 - photoelectrochemical characterization of CuGaSe_2 and $\text{Cu}(\text{Ga}, \text{In})\text{Se}_2$ films, 57
- CuInSe_2 single crystals
 - relation between electrical properties and composition in CuInSe_2 single crystals, 301
- Current-voltage characteristic
 - a method for the measurement of the photovoltaic cell or module current-voltage characteristic, 335
- Cu_2S layer
 - the use of low-temperature chemiplating for fabricating $\text{Cu}_2\text{S}/\text{CdS}$ solar cells, 261

- Cu₂S/CdS solar cells
 - the use of low-temperature chemiplating for fabricating Cu₂S/CdS solar cells, 261
- Degradation
 - test techniques for voltage/humidity-induced degradation of thin-film photovoltaic modules, 103
 - thin film module fabrication and reliability advances, 121
- Depth
 - depth and interface resolution in CdS/CuInSe₂ heterostructures, 273
- Design
 - thin film module fabrication and reliability advances, 121
- Device characterization
 - depth and interface resolution in CdS/CuInSe₂ heterostructures, 273
- Device-modelling program
 - computer-aided analysis of high efficiency laser-grooved silicon solar cells, 233
- Diffusion length
 - diffusion length and interface recombination velocity measurement of a GaAs solar cell using two emitter fabrications and quantum yield, 223
- Durability
 - two year performance evaluation of a 4kW amorphous-silicon photovoltaic system in Michigan, 163
- Dusty conditions
 - static device for improving a high voltage photovoltaic generator working under dusty conditions, 277
- Electrical characterization
 - electrical characterization of all-sputtered CdS/CuInSe₂ solar cell heterojunctions, 31
- Electrical consequences
 - local investigation of hot spot areas on multicrystalline silicon solar cells, 327
- Electrical properties
 - relation between electrical properties and composition in CuInSe₂ single crystals, 301
- Electrolytes
 - an investigation of arsenic-doped CdS/electrolyte solar cells, 1
- Elemental composition
 - relation between electrical properties and composition in CuInSe₂ single crystals, 301
- Emitter fabrications
 - diffusion length and interface recombination velocity measurement of a GaAs solar cell using two emitter fabrications and quantum yield, 223
- Encapsulation
 - encapsulation and life testing issues for 1 ft² CdS/CdTe modules, 135
 - optimization of antireflection coating thickness for textured polycrystalline silicon solar cells - an experimental study, 253
- Field performance
 - field performance of concentrated photovoltaic modules, 343
- Film thickness
 - the optical constants of CdSe thin films in the visible and near-IR, 185
- Formation mechanism
 - local investigation of hot spot areas on multicrystalline silicon solar cells, 327
- GaAs
 - design of GaAs solar cells with low doped base, 95
- GaAs solar cell
 - diffusion length and interface recombination velocity measurement of a GaAs solar cell using two emitter fabrications and quantum yield, 223
- Gallium
 - photoelectrochemical characterization of CuGaSe₂ and Cu(Ga, In)Se₂ films, 57
- Germanium substrates
 - surface analysis of thermally annealed germanium substrate for use in thin film multicolor solar cells, 199
- Glow discharge decomposition
 - photovoltaic properties of a carbon film/silicon heterojunction, 315
- Grain boundary effects
 - grain boundary effects in polycrystalline silicon solar cells, 77
- Hazard identification
 - hazard identification and characterization of organometals in growing

- III-V semiconductors for the production of photovoltaic cells, 209
- Heavily doped emitters
 - the quantum collection efficiency of heavily doped emitters in silicon solar cells, 293
- High voltage photovoltaic generator
 - static device for improving a high voltage photovoltaic generator working under dusty conditions, 277
- Hot spots
 - local investigation of hot spot areas on multicrystalline silicon solar cells, 327
- Hot-spot efficacy
 - factors affecting the hot spot efficacy in photovoltaic arrays, 11
- Humidity-induced degradation
 - test techniques for voltage/humidity-induced degradation of thin-film photovoltaic modules, 103
- I-V characteristic
 - a method for the determination of the standard deviations of the solar cell I-V characteristic parameters, 351
- III-V semiconductors
 - hazard identification and characterization of organometals in growing III-V semiconductors for the production of photovoltaic cells, 209
- In₂O₃
 - characterization of structural defects in the presence of In₂O₃ in CuInSe₂ prepared by spray pyrolysis, 177
- Indium tin oxide
 - investigations on the photovoltaic properties of indium tin oxide ITO/n-GaAs heterojunctions, 319
- Interface recombination velocity
 - diffusion length and interface recombination velocity measurement of a GaAs solar cell using two emitter fabrications and quantum yield, 223
- Interface resolution
 - depth and interface resolution in CdS/CuInSe₂ heterostructures, 273
- Intrinsic defect model
 - relation between electrical properties and composition in CuInSe₂ single crystals, 301
- Inverter system
 - update on the PEC/Solarex thin film test site, 151
- ITO/n-GaAs heterojunctions
 - investigations on the photovoltaic properties of indium tin oxide ITO/n-GaAs heterojunctions, 319
- Laser scribing
 - indoor stability tests on CdS/CdTe/ZnTe n-i-p submodules, 129
- Laser-grooved silicon solar cells
 - computer-aided analysis of high efficiency laser-grooved silicon solar cells, 233
- Local investigation
 - local investigation of hot spot areas on multicrystalline silicon solar cells, 327
- Long-term testing
 - encapsulation and life testing issues for 1 ft₂ CdS/CdTe modules, 135
- Low-temperature chemiplating
 - the use of low-temperature chemiplating for fabricating Cu_xS/CdS solar cells, 261
- Measurement method
 - a method for the measurement of the photovoltaic cell or module current-voltage characteristic, 335
- Mechanical scribing
 - indoor stability tests on CdS/CdTe/ZnTe n-i-p submodules, 129
- Minority carrier degeneracy
 - the quantum collection efficiency of heavily doped emitters in silicon solar cells, 293
- Minority carriers lifetime
 - lifetime measurements in solar cells of various thicknesses and the related silicon wafers, 287
- MOCVD
 - hazard identification and characterization of organometals in growing III-V semiconductors for the production of photovoltaic cells, 209
- Module efficiency
 - thin-film PV performance at PG&E, 145
- Modules
 - evaluation of the potential usefulness of water immersion for a-Si thin film modules, 115
 - test techniques for voltage/humidity-induced degradation of thin-film photovoltaic modules, 103
 - thin film module fabrication and reliability advances, 121

- Moisture sensitivity
 - evaluation of the potential usefulness of water immersion for a-Si thin film modules, 115
- Multicolor solar cells
 - surface analysis of thermally annealed germanium substrate for use in thin film multicolor solar cells, 199
- Multicrystalline solar cells
 - local investigation of hot spot areas on multicrystalline silicon solar cells, 327
- Open-circuit voltage
 - the photocurrent and the open-circuit voltage of a silicon solar cell, 41
- Operational performance
 - two year performance evaluation of a 4kW amorphous-silicon photovoltaic system in Michigan, 163
- Optical constants
 - the optical constants of CdSe thin films in the visible and near-IR, 185
- Optical coupling
 - optimization of antireflection coating thickness for textured polycrystalline silicon solar cells - an experimental study, 253
- Organometals
 - hazard identification and characterization of organometals in growing III-V semiconductors for the production of photovoltaic cells, 209
- Outdoor performance
 - thin-film PV performance at PG&E, 145
- p-Type conductivity
 - photovoltaic properties of a carbon film/silicon heterojunction, 315
- Performance
 - thin-film PV performance at PG&E, 145
 - two year performance evaluation of a 4kW amorphous-silicon photovoltaic system in Michigan, 163
 - update on the PEC/Solarex thin film test site, 151
- Photocurrent
 - improvements in IR photocurrent scanning, 69
 - the photocurrent and the open-circuit voltage of a silicon solar cell, 41
- Photoelectrochemical characterization
 - photoelectrochemical characterization of CuGaSe₂ and Cu(Ga, In)Se₂ films, 57
- Photovoltaic cell
 - a method for the measurement of the photovoltaic cell or module current-voltage characteristic, 335
- Photovoltaic response
 - photovoltaic properties of a carbon film/silicon heterojunction, 315
- Pull tests
 - improved soldering technique for concentrator solar cells, 193
- Quantum
 - the quantum collection efficiency of heavily doped emitters in silicon solar cells, 293
- Quantum yield
 - diffusion length and interface recombination velocity measurement of a GaAs solar cell using two emitter fabrications and quantum yield, 223
- Refractive index
 - the optical constants of CdSe thin films in the visible and near-IR, 185
- Reliability
 - two year performance evaluation of a 4kW amorphous-silicon photovoltaic system in Michigan, 163
- Reliability advances
 - thin film module fabrication and reliability advances, 121
- Reliability test
 - evaluation of the potential usefulness of water immersion for a-Si thin film modules, 115
- Resistance
 - method of calculating the distributed and lumped components of the resistance in solar cells, 241
- Seasonal performance
 - two year performance evaluation of a 4kW amorphous-silicon photovoltaic system in Michigan, 163
- Sheet resistance
 - method of calculating the distributed and lumped components of the resistance in solar cells, 241
- Silicon
 - grain boundary effects in polycrystalline silicon solar cells, 77
 - the photocurrent and the open-circuit voltage of a silicon solar cell, 41

Silicon solar cells

field performance of concentrated photovoltaic modules, 343

the quantum collection efficiency of heavily doped emitters in silicon solar cells, 293

Silicon wafers

lifetime measurements in solar cells of various thicknesses and the related silicon wafers, 287

Solar cell characteristic

a method for the determination of the standard deviations of the solar cell *I-V* characteristic parameters, 351

Soldering technique

improved soldering technique for concentrator solar cells, 193

Spray pyrolysis

characterization of structural defects in the presence of In_2O_3 in CuInSe_2 prepared by spray pyrolysis, 177

Stability

indoor stability tests on CdS/CdTe/ZnTe n-i-p submodules, 129

Standard deviations

a method for the determination of the standard deviations of the solar cell *I-V* characteristic parameters, 351

Static device

static device for improving a high voltage photovoltaic generator working under dusty conditions, 277

Structural defects

characterization of structural defects in the presence of In_2O_3 in CuInSe_2 prepared by spray pyrolysis, 177

Surface analysis

surface analysis of thermally annealed germanium substrate for use in thin-film multicolor solar cells, 199

Taylor series

a method for the determination of the standard deviations of the solar cell *I-V* characteristic parameters, 351

Test techniques

test techniques for voltage/humidity-induced degradation of thin-film photovoltaic modules, 103

Textured polycrystalline silicon

optimization of antireflection coating thickness for textured polycrystalline silicon solar cells - an experimental study, 253

Thermal annealing

surface analysis of thermally annealed germanium substrate for use in thin film multicolor solar cells, 199

Thick film

lifetime measurements in solar cells of various thicknesses and the related silicon wafers, 287

Thin film test site

update on the PECO/Solarex thin film test site, 151

Variable irradiance

a method for the measurement of the photovoltaic cell or module current-voltage characteristic, 335

Voltage-induced degradation

test techniques for voltage/humidity-induced degradation of thin-film photovoltaic modules, 103

Water immersion

evaluation of the potential usefulness of water immersion for a-Si thin film modules, 115

